

REMARKS

Claims 1-13 are pending. Claims 14-20 were canceled. Claims 1 and 9 were amended to more particularly point out and distinctly claim the present invention. Claims 2-8 and 10-13 were amended to address the claim objections raised by the Examiner. Claims 3 and 12 were further amended to conform to the amendment in claims 1 and 9, respectively. The Title was amended to be descriptive. The Abstract was amended to conform to the claim amendments. For the reasons stated below, Applicant respectfully submits that all claims pending in this application are in condition for allowance.

No new matter was introduced in the Amendment. All of the disclosed fabrication methods inherently form the non-sidewall portions of the conductive bump as a unitary structure having an exposed top surface.

Claim Objections

Claims 2-8 and 10-13 were amended to address both of the claim objections raised by the Examiner. Withdrawal of this object is therefore respectfully requested.

Prior Art Rejections

Claims 1-5 and 9-13 were rejected under 35 U.S.C. 102(b) as being anticipated by Kim., and claims 6 and 8 were rejected under 35 U.S.C. 103(a) as being unpatentable over Kim. Withdrawal of these rejections is respectfully requested as they relate to amended claims 1-13.

1. Patentability of amended claims 1 and 9 over Kim

Kim discloses a conductive bump on a semiconductor substrate. However, the non-sidewall portions of the conductive bump in Kim is formed as a two-part structure having a first bump (16) with an oxide layer (18) on its side surfaces and a second bump (17) on its upper (top) surface. In contrast to Kim, the non-sidewall portions of the conductive bump of the present

invention is a less complex structure because there is no second bump on the top surface.

Claims 1 and 9 now recite that “the portions of the at least one conductive bump other than the sidewall is a unitary structure,” in contrast to Kim’s non-sidewall portion of the conductive bump structure that is formed from two discrete parts. Furthermore, the top surface of the conductive bump is now recited in claims 1 and 9 as being “uncovered and directly exposed to its surroundings.” In contrast to the present invention, the top surface of Kim’s first bump (16) is covered by the second bump (17) and is therefore not directly exposed to its surroundings. Claim 9 further recites that the “the top surface of the conductive bump is thereby “directly exposed to the at least one particle in the anisotropic conductive film.” In contrast to the present invention, the top surface of Kim’s first bump (16) is not directly exposed to the particles (19) in Kim’s material (20).

Kim’s second bump (17) is directly exposed to its surroundings and to the particles (19). However, Kim’s second bump (17) is not a unitary structure situated on a top surface of a semiconducting substrate comprising circuits therein, as recited in claim 1, nor does the second bump (17) meet the structural limitations defined in claim 9 with respect to the claimed conductive bump and the relationship of the conductive bump to the semiconducting substrate, electronic substrate and anisotropic conductive film. Therefore, the second bump cannot substitute for the first bump (16) in reading on Applicant’s currently amended invention.

In sum, neither Kim’s first bump (16), second bump (17), or combination of first and second bumps (16) and (17) disclose the presently claimed invention. Nor does Kim suggest the presently disclosed invention which provides a less complex structure that the structure in Kim that performs a similar function.

2. Patentability of dependent claims over Kim

The dependent claims are patentable for at least the reason that they are dependent upon allowable independent claims and because they recite additional patentable features.

Application No. 10/717,355
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Conclusion

Insofar as the Examiner's rejection has been fully addressed, the instant application is in condition for allowance. Issuance of a Notice of Allowability of all pending claims is therefore earnestly solicited.

Respectfully submitted,

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